

Warm-up!

Graph:

$$f(x) = x^2 + 2x - 3$$

$$V (-1, -4)$$

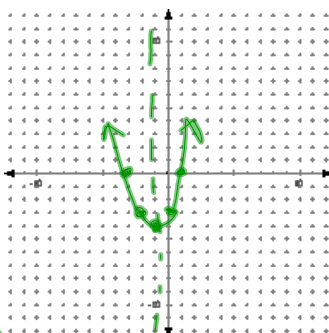
$$\text{a.o.s. } x = -1$$

$$\text{y-int } (0, -3)$$

$$\text{mirrored pt } (-2, -3)$$

$$\text{another pt } (1, 0)$$

$$\text{mirrored pt } (-3, 0)$$



$$\text{x-intercepts } (1, 0) (-3, 0)$$

Solving Quadratic Equations by:

6.2 graphing
6.3 factoring

ex 1:

Solve by factoring

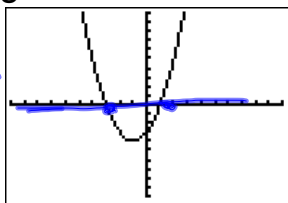
$$x^2 + 2x - 3 = 0$$

$$x^2 + 3x - 1x - 3 = 0$$

$$(x+3)(x-1) = 0$$

$$x = -3 \quad x = 1$$

$$\{-3, 1\}$$



Roots
equations

Zeros
functions

x-intercepts
graphs of functions

Solve

$$\begin{array}{r} -x^2 - 6x - 9 \\ -x^2 - 3x - 3x - 9 \\ \hline x(x+3) \rightarrow (x+3) \\ (x+3)(-x-3) \\ x = -3 \quad x = -3 \end{array}$$

$$x^2 + 6x + 9 = 0$$

$$(x+3)^2$$

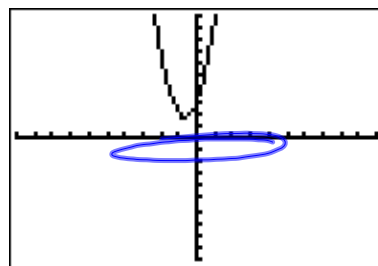
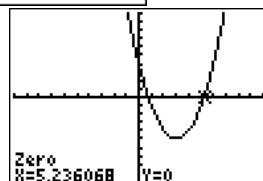
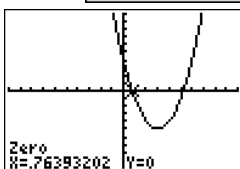
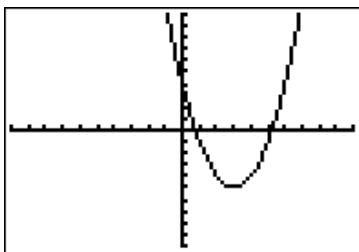
$\{-3\}$

4


Solve


Not factorable


- no TR
- Irrational



no
Real
solution

Two Real Solutions 
- Rat'l or Irrat

One Real Solution 

No Real Solution 

ex 4:
Solve
 $3x^2 + 4x + 3 = 0$



HW

p298 32, 36 (Use calc)

p304 14-23, 32